

Amendment and Response

Applicant: Michael G. Dykhoff

Serial No.: 09/925,553

Filed: August 9, 2001

Docket No.: M120.200.101 (56950US002)

Title: FIRE STOP ARTICLE

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed August 25, 2004. In the Office Action, the finality of a previous office action was withdrawn and Applicant's submission filed on May 28, 2004 was entered. To this end, the Office Action mailed on August 25, 2004 withdrew the rejections under 35 U.S.C. § 102(b) of claims 31, 34-36, 38-41, 44-45, and 47 as being anticipated by U.S. Patent No. 5,502,937 ("Wilson"). In addition, the 35 U.S.C. § 103(a) rejections of claims 37 and 46 over Wilson in view of Eiermann, U.S. Patent No. 4,584,214 ("Eiermann") were withdrawn, and the 35 U.S.C. § 103(a) rejections of claims 32 and 33 over Wilson in view of Sakno, U.S. Patent No. 5,634,304 ("Sakno") were withdrawn.

Claims 31, 35-36, 38-39, 41, and 44-45 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ward, U.K. Patent Application GB 2278083A ("Ward"). In addition, claims 32-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ward in view of Sakno. Claims 37 and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ward in view of Eiermann. Claims 34, 40, and 47 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ward in view of Wilson.

With this Response, claims 48-52 are newly presented. Claims 31-41 and 44-52 remain pending in the application and are presented for consideration and allowance.

Claim Rejections under 35 U.S.C. §§ 102 and 103

Claims 31, 35-36, 38-39, 41, and 44-45 were rejected under 35 U.S.C. § 102(b) as being anticipated by Ward. The Examiner takes the position that Ward discloses "a plurality of fire stop articles arranged in an opening (figure 3 number 6)". Applicant respectfully disagrees. It is unclear as to whether the Examiner is viewing the fillets 6 of Ward as being the "fire stop articles" of claims 31 and 44. If so, it is respectfully submitted that this interpretation is incorrect and unsupported by the teachings of Ward as described below. Conversely, if the Examiner is viewing the cladding boards 1, 2, 3, 4, and 5 of Ward as being the "fire stop articles" of claims 31 and 44, then other limitations of the claims are not satisfied.

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Ward teaches a steel I-beam surrounded by cladding boards 1, 2, 3, 4 and 5. The cladding boards 1-5 each comprise an inner layer 10 having a first intumescent material 11 affixed to one major surface of inner layer 10, and a second intumescent layer 12 attached to a second major surface of inner layer 10. Thus, Ward provides an exterior fire resistant cladding structure adapted to prevent the steel I-beam from bending and buckling when exposed to a building fire (Ward, page 1, lines 3-8). With this in mind, Ward teaches that the cladding boards 1-5, and in particular lateral cladding boards 2 and 3, are supported along a length of the I-beam by fillets 6 spaced at regular intervals within a channel 7 defined by an upper 8 and a lower 9 flanges of the I-beam. In this manner, the cladding boards 1-5 are adhered to an exterior of the I-beam and supported along the length of the I-beam by the fillets 6 within the channel 7. The fillets 6 are not cladding boards, but are simply spacers disposed along the channel 7 to which the cladding boards 1-5 are attached. It is noted that Ward does not teach or suggest that the fillets 6 have the same composition as the cladding boards 1-5. To the contrary, FIG. 4 of Ward is an enlarged view of the portion marked "A" in FIG. 2 that is otherwise a cross-section of a cladded I-beam (Ward, page 4, lines 13-20). When properly viewed, it is clear that the layers 10, 11, and 12 in FIG. 4 are portions of the cladding board 2 of FIG. 2, and are not part of, or attributable to, the fillet 6. That is to say, in the view of FIGS. 2 and 4, the fillet 6 merely abuts against the layer 12 of the cladding board 2; and, the fillet 6 does not include the layers 10, 11, and 12. Instead, like any other fillet, the fillet 6 appears to be a thin narrow strip of material.

In contrast, independent claim 31 includes a fire barrier assembly for fire stopping an opening in a partition, the fire barrier assembly comprising: a plurality of fire stop articles arranged in the opening without a secondary support structure. Independent claim 44 includes a fire barrier installation, comprising: a partition containing an opening; and a plurality of fire stop articles arranged in said opening without a secondary support structure. It is respectfully submitted that Ward does not teach or suggest a plurality of fire stop articles arranged in an opening. Specifically, Ward teaches in the last full paragraph of page 4 that the steel I-beam is "surrounded" by the cladding boards 1-5, such that the cladding boards 1-5 are not in the opening (or channel) as otherwise required by independent claims 31 and 44.

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Moreover, fillet 6 is fairly viewed as a secondary support structure relative to the cladding boards 1-5, such that if the Examiner views the cladding boards 1-5 as being the claimed “fire stop articles,” Ward fails to teach or suggest at least that limitation of the independent claims. Additionally, the fillets 6 of Ward do not comprise an intumescent material arranged around at least a portion of an interior insulating material, as set forth in claims 31 and 44. It is further noted that the fillets 6 even more clearly do not teach or suggest the limitations of claims 35-41.

In summary, the fillets 6 of Ward do not satisfy the “insulating material/intumescent material” limitations of claims 31 and 44; and the cladding boards 1-5 of Ward are not arranged in an opening. For at least the above reasons, it is respectfully requested that the 35 U.S.C. § 102(b) rejections to claims 31, 35-36, 38-39, 41, and 44-45 be withdrawn.

Claims 32-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ward in view of Sakno. Claims 37 and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ward in view of Eiermann. Claims 34, 40, and 47 were rejected under 37 U.S.C. § 103(a) as being unpatentable over Ward in view of Wilson. It is believed that none of the references, specifically none of Sakno, Eiermann, and Wilson, teach or suggest limitations of independent claims 31 and 44 as reflected by the withdrawal of the rejections in the prior Office Action. Consequently, it is believed that independent claims 31 and 44 are non-obvious under 35 U.S.C. § 103 such that any claims depending therefrom are also non-obvious, and therefore, allowable. In re Fine, 837 F.2d 1071; 5 USPQ2d 1596 (Fed. Cir. 1988); MPEP 2143.03.

Claim 48 is newly presented to particularly point out and distinctly claim subject matter of a fire barrier assembly. Claim 48 depends from claim 31, and recites that the plurality of fire stop articles includes a column of stacked fire stop articles arranged in the opening. Support for this language is found, for example at page 12, lines 25-28. It is respectfully submitted that none of the cited references teach or suggest this limitation.

Claim 49 is newly presented to particularly point out and distinctly claim subject matter of a fire barrier assembly. Claim 49 depends from claim 31, and recites that the intumescent material defines an exterior surface opposite the interior insulating material, and that the exterior surface does not exhibit adhesive properties at ambient temperatures. Support for this language

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is found, for example, at page 11, lines 4-5. It is respectfully submitted that Ward, the primary reference relied upon by the Examiner, requires an exterior surface that exhibits adhesive properties at ambient temperatures.

Claim 50 is newly presented to particularly point out and distinctly claim subject matter of a fire barrier assembly. Claim 50 depends from claim 31, and recites that the intumescent material defines an exterior surface opposite the interior insulating material, and that the exterior surface does not exhibit cohesive properties at ambient temperatures. Support for this language is found, for example, at page 11, lines 4-5. It is respectfully submitted that Ward, the primary reference relied upon by the Examiner, requires an exterior surface that exhibits cohesive properties at ambient temperatures.

Claim 51 is newly presented to particularly point out and distinctly claim subject matter of a fire barrier installation. Claim 51 depends from claim 44, and recites that the plurality of fire stop articles are removably positionable within the opening. Support for this language is found, for example, at page 10, lines 15-18 and page 10, line 30 – page 11, line 3. It is respectfully submitted that the adhesive nature of the cladding board 1-5 of Ward renders removal following installation impossible.

Independent claim 52 relates to a fire stop assembly comprising a free standing stack of separately formed fire stop articles each including an interior insulating material defining opposed first and second major surfaces and an intumescent material encompassing at least a portion of the first and second major surfaces. An exterior of the fire stop articles is not cohesive at ambient temperatures. Support for this language is found, for example, at page 10, line 15 through page 11, line 5, and at page 12, lines 25-30. It is respectfully submitted that Ward, the primary reference relied upon by the Examiner, requires an exterior surface that exhibits cohesive properties at ambient temperatures. Further, none of the cited references provide a free standing stack of separately formed fire stop articles.

In light of the above, it is respectfully submitted that newly presented claims 48-52 recite patentable subject matter and are in condition for allowance.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 31-41 and 44-52 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 31-41 and 44-52 is respectfully requested.

It is believed that a fee is required under 37 C.F.R. 1.16(b)(c) for the addition of a fourth independent claim. Therefore, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471 in the amount of \$86.00.

The Examiner is invited to telephone the Applicant's representative at the below-listed number to facilitate prosecution of this application.

Respectfully submitted,

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By his attorneys,

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CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 17 day of December, 2004

By 

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